

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

- 1-27 (Canceled)
28. (New) A method for preparing an unsaturated carboxylic acid from the corresponding aldehyde, comprising the steps of:
- a) oxidizing said aldehyde, in a controlled basic medium and using molecular oxygen or a gas containing it, in the presence of a catalyst based on palladium and/or platinum and of an activator based on bismuth, under conditions such that the oxidation occurs in a diffusion mode, and
 - b) recovering the carboxylic acid formed in step a).
29. (New) The method as claimed in claim 28, wherein the starting aldehyde is an aliphatic or cycloaliphatic aldehyde having at least one unsaturation, a double bond or a triple bond.
30. (New) The method as claimed in claim 29, wherein the starting aldehyde is an aliphatic aldehyde having two double bonds of which at least one is conjugated with the carbonyl group.
31. (New) The method as claimed in claim 30, wherein the starting aldehyde is a terpene aldehyde.
32. (New) The method as claimed in claim 28, wherein the starting aldehyde corresponds to formula (I):

A-CHO (I)

wherein:

A represents a hydrocarbon group having at least one unsaturation having from 4 to 19 carbon atoms which is a linear or branched, saturated or unsaturated acyclic aliphatic group; a monocyclic or polycyclic, saturated or unsaturated or aromatic carbocyclic group; a linkage of a saturated or unsaturated aliphatic group and/or of a saturated, unsaturated or aromatic carbocycle.

33. (New) The method as claimed in claim 32, wherein A represents a linear or branched acyclic aliphatic group having from 4 to 19 carbon atoms having one or more unsaturations in the chain, which are single or conjugated double bonds or triple bonds, said unsaturation being at the chain end and/or alternatively inside the chain and/or conjugated with the CO group.
34. (New) The method as claimed in claim 33, wherein A represents a linear or branched alkyl group having from 4 to 19 carbon atoms and having at least one double bond, optionally two double bonds of which at least one is conjugated with the CO group.
35. (New) The method as claimed in claim 32, wherein A represents a carbocycle having from 3 to 8 carbon atoms in the ring, optionally 5 or 6 and having 1 or 2 unsaturations in the ring, optionally 1 or 2 double bonds.
36. (New) The method as claimed in claim 35, wherein A represents a cycloalkyl group having 5 or 6 carbon atoms and having a double bond.
37. (New) The method as claimed in claim 32, wherein A represents a polycyclic

carbocyclic group having from 3 to 6 carbon atoms in each ring and of which at least one of the rings presents one unsaturation, optionally the other ring being saturated or aromatic.

38. (New) The method as claimed in claim 28, wherein the starting aldehyde is citral, prenal, retinal, cyclocitral, or safranal.
39. (New) The method as claimed in claim 28, wherein the platinum and/or palladium catalyst is provided in the form of platinum black, palladium black, platinum oxide, palladium oxide or the noble metal itself deposited on a support.
40. (New) The method as claimed in claim 28, wherein the catalyst is used in a quantity, expressed by weight of metal M_1 relative to that of the compound of formula (I), of from 0.001 to 10%.
41. (New) The method as claimed in claim 28, wherein the activator is an organic or inorganic derivative of bismuth chosen from the group consisting of:
bismuth oxides; bismuth hydroxides; bismuth salts of inorganic hydracids;
bismuthyl salts of inorganic hydracids; bismuth salts of inorganic oxyacids,
bismuthyl salts of inorganic oxyacids; bismuth salts of aliphatic or aromatic organic acids; and bismuthyl salts of aliphatic or aromatic organic acids.
42. (New) The method as claimed in claim 41, wherein the bismuth derivative is chosen from the group consisting of: bismuth oxides Bi_2O_3 and Bi_2O_4 ; bismuth hydroxide $Bi(OH)_3$; bismuth chloride $BiCl_3$; bismuth bromide $BiBr_3$; bismuth iodide BiI_3 ; neutral bismuth sulfate $Bi_2(SO_4)_3$; neutral bismuth nitrate

$\text{Bi}(\text{NO}_3)_3 \cdot 5\text{H}_2\text{O}$; bismuthyl carbonate $(\text{BiO})_2\text{CO}_3 \cdot 0.5\text{H}_2\text{O}$; bismuth acetate

$\text{Bi}(\text{C}_2\text{H}_3\text{O}_2)_3$; and bismuthyl salicylate $\text{C}_6\text{H}_4\text{CO}_2(\text{BiO})\text{OH}$.

43. (New) The method as claimed in claim 42, wherein the activator is in a quantity expressed by weight of bismuth relative to the weight of the metal M_1 of between 1 and 200%.
44. (New) The method as claimed in claim 28, wherein the basic agent is sodium hydroxide or potassium hydroxide.
45. (New) The method as claimed in claim 28, wherein the quantity of base added into the reaction medium is such the number of moles of OH^- and the number of moles of aldehyde are in a ratio of between 0.9 and 1.1.
46. (New) The method as claimed in claim 28, wherein water is present in the reaction medium in a quantity sufficient to solubilize the salt of the acid formed.
47. (New) The method as claimed in claim 28, wherein the oxidation takes place at a temperature of between 20°C and 60°C .
48. (New) The method as claimed in claim 28, being carried out at atmospheric pressure.
49. (New) The method as claimed in claim 28, being carried out under stirring conditions which are such that the reaction mode is a diffusion mode.
50. (New) The method as claimed in claim 46, wherein the water, the basic agent, the catalyst based on palladium and/or platinum, the activator, and then finally the aldehyde to be oxidized, are being added.

51. (New) The method as claimed in claim 50, wherein the metal M_1 is reduced with formalin.
52. (New) The method as claimed in claim 50, wherein the reaction mixture maintained under a stream of inert gas is heated to the desired reaction temperature and then oxygen or a gas containing it is introduced.
53. (New) The method as claimed in claim 52, wherein the medium is stirred at the desired temperature until a quantity of oxygen corresponding to that necessary to convert the formyl group to a carboxyl group is consumed.
54. (New) The method as claimed in claim 28, wherein in step b) the carboxylic acid formed a) is recovered after an acid treatment.